

EXHIBIT 46

APPENDIX K - Command Keyword Analysis

| COLOR KEY | DESCRIPTION |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Legacy Command Term | Command words used in pre-Cisco IOS systems, like UNIX or TOPS-20 or VAX/VMS |
| Industry Standard Term | A term or acronym used or defined in an IETF, IEEE, or similar document at the time the command was purportedly added to Cisco IOS; may also refer to MIB variables |
| Common Industry Term | A common industry term or acronym familiar to the expected user of the command at the time it was added to Cisco IOS; it may also describe standardized functionality |

To the extent that a command keyword is not colored, it is not protected by copyright under at least the short words and phrases doctrine. Moreover, many of the non-colored keywords have nevertheless been adopted and used by the networking industry as part of the industry standard CLI. The adoption of the commands below is set forth in other charts attached to my Report.

| Disputed Cisco Command Words | | | | | Additional Opinions |
|------------------------------|-----------------------|-------------------------------|---------|--------|---------------------|
| aaa | accounting | | | | |
| aaa | accounting | dot1x | | | |
| aaa | authentication | login | | | |
| aaa | authorization | config-commands | | | |
| aaa | authorization | console | | | |
| aaa | group | server | radius | | |
| aaa | group | server | tacacs+ | | |
| address-family | | | | | |
| aggregate-address | | | | | |
| area | default-cost | | | | |
| area | default-cost | | | | |
| area | nssa | | | | |
| area | nssa | | | | |
| area | nssa | default-information-originate | | | |
| area | nssa | default-information-originate | | | |
| area | nssa | no-summary | | | |
| area | nssa | translate | type7 | always | |
| area | nssa | translate | type7 | always | |
| area | range | | | | |
| area | range | | | | |
| area | stub | | | | |
| area | stub | | | | |
| arp | timeout | | | | |
| banner | login | | | | |
| banner | motd | | | | |
| bfd | all-interfaces | | | | |
| bgp | client-to-client | reflection | | | |
| bgp | cluster-id | | | | |
| bgp | confederation | identifier | | | |
| bgp | confederation | peers | | | |
| bgp | listen | limit | | | |
| bgp | log-neighbor-changes | | | | |
| bgp | redistribute-internal | | | | |
| boot | system | | | | |
| channel-group | | | | | |
| class-map | type | control-plane | | | |
| clear | arp-cache | | | | |

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| clear | counters | | | |
| clear | ip | arp | | |
| clear | ip | bgp | | |
| clear | ip | igmp | group | |
| clear | ip | mfib | fastdrop | |
| clear | ip | mroute | | |
| clear | ip | msdp | sa-cache | |
| clear | ip | nat | translation | |
| clear | ip | ospf | neighbor | |
| clear | ipv6 | neighbors | | |
| clear | ipv6 | ospf | force-spf | |
| clear | lldp | counters | | "counters" is a common industry term |
| clear | lldp | table | | |
| clear | mac | address-table | dynamic | "static" and "dynamic" are common industry terms |
| clear | spanning-tree | counters | | |
| clock | set | | | |
| clock | timezone | | | |
| control-plane | | | | |
| default-information | originate | | | |
| default-information | originate | | | |
| default-metric | | | | |
| default-metric | | | | |
| distance | bgp | | | |
| domain-id | | | | |
| dot1x | max-reauth-req | | | |
| dot1x | pae | authenticator | | |
| dot1x | port-control | | | |
| dot1x | reauthentication | | | |
| dot1x | system-auth-control | | | |
| dot1x | timeout | quiet-period | | The term "timeout" is a common industry term that has particular meanings, depending on the context of how it is used |
| dot1x | timeout | reauth-period | | |
| dot1x | timeout | tx-period | | |
| enable | secret | | | |
| erase | startup-config | | | |
| errdisable | detect | cause | link-flap | |
| errdisable | recovery | | | |
| errdisable | recovery | | | |
| flowcontrol | receive | | | "receiving" and "sending" are common industry terms generally used to describe the direction data may be flowing |
| flowcontrol | send | | | |
| interface | ethernet | | | "interface" is a well-known networking industry term |
| interface | loopback | | | "loopback" is a well-known networking industry term, and is also used more broadly in the telecommunications industry |
| interface | port-channel | | | |
| interface | vlan | | | |
| ip | access-group | | | |
| ip | access-list | | | |
| ip | access-list | standard | | |
| ip | address | | | |
| ip | as-path | access-list | | |
| ip | community-list | expanded | | |
| ip | community-list | standard | | |
| ip | dhcp | smart-relay | | |

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| ip | dhcp | smart-relay | global | | |
| ip | dhcp | snooping | | | "snooping" is a term found in industry standard documents, but it is also a well-known networking term. |
| ip | dhcp | snooping | information | option | |
| ip | dhcp | snooping | vlan | | |
| ip | domain | lookup | | | |
| ip | domain-name | | | | |
| ip | ext-community-list | expanded | | | |
| ip | ext-community-list | standard | | | |
| ip | helper-address | | | | |
| ip | host | | | | |
| ip | http | client | source-interface | | |
| ip | icmp | redirect | | | |
| ip | igmp | last-member-query-count | | | |
| ip | igmp | last-member-query-interval | | | |
| ip | igmp | query-interval | | | |
| ip | igmp | query-max-response-time | | | |
| ip | igmp | snooping | | | |
| ip | igmp | snooping | querier | | |
| ip | igmp | snooping | vlan | | |
| ip | igmp | snooping | vlan | immediate-leave | |
| ip | igmp | snooping | vlan | mrouter | "mrouter" is shorthand for multicast router |
| ip | igmp | snooping | vlan | static | "static" and "dynamic" are common industry terms |
| ip | igmp | startup-query-count | | | |
| ip | igmp | startup-query-interval | | | |
| ip | igmp | static-group | | | |
| ip | igmp | version | | | "version" in the context of routing protocols is understood to refer to the particular version of the protocol being run |
| ip | load-sharing | | | | |
| ip | local-proxy-arp | | | | |
| ip | msdp | cache-sa-state | | | |
| ip | msdp | default-peer | | | |
| ip | msdp | description | | | |
| ip | msdp | group-limit | | | |
| ip | msdp | keepalive | | | |
| ip | msdp | mesh-group | | | |
| ip | msdp | originator-id | | | |
| ip | msdp | peer | | | |
| ip | msdp | sa-filter | in | | "sa" stands for "Source-Active" messages per the Multicast Source Discovery Protocol |
| ip | msdp | sa-filter | out | | |
| ip | msdp | sa-limit | | | |
| ip | msdp | shutdown | | | |
| ip | msdp | timer | | | |
| ip | multicast | boundary | | | |
| ip | multicast-routing | | | | |
| ip | name-server | | | | |
| ip | nat | pool | | | |
| ip | nat | translation | tcp-timeout | | |
| ip | nat | translation | udp-timeout | | |
| ip | ospf | authentication | | | |
| ip | ospf | authentication-key | | | |
| ip | ospf | bfd | | | |

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|------|--------------|----------------------|-------------|-----------------------------------------------------------------------------|
| ip | ospf | cost | | |
| ip | ospf | dead-interval | | |
| ip | ospf | hello-interval | | |
| ip | ospf | message-digest-key | | |
| ip | ospf | name-lookup | | |
| ip | ospf | network | | |
| ip | ospf | priority | | |
| ip | ospf | retransmit-interval | | |
| ip | ospf | shutdown | | |
| ip | ospf | transmit-delay | | |
| ip | pim | anycast-rp | | |
| ip | pim | bfd | | |
| ip | pim | bfd-instance | | |
| ip | pim | bsr-border | | |
| ip | pim | bsr-candidate | | |
| ip | pim | dr-priority | | |
| ip | pim | log-neighbor-changes | | |
| ip | pim | neighbor-filter | | |
| ip | pim | query-interval | | |
| ip | pim | register-source | | |
| ip | pim | rp-address | | |
| ip | pim | rp-candidate | | |
| ip | pim | sparse-mode | | |
| ip | pim | spt-threshold | | |
| ip | pim | spt-threshold | group-list | |
| ip | pim | ssm | range | |
| ip | prefix-list | | | |
| ip | protocol | | | |
| ip | proxy-arp | | | |
| ip | radius | source-interface | | |
| ip | rip | v2-broadcast | | |
| ip | route | | | |
| ip | routing | | | |
| ip | tacas | source-interface | | |
| ipv6 | access-group | | | |
| ipv6 | access-list | | | |
| ipv6 | address | | | |
| ipv6 | dhcp | relay | destination | |
| ipv6 | enable | | | |
| ipv6 | host | | | |
| ipv6 | nd | managed-config-flag | | |
| ipv6 | nd | ns-interval | | "ns" stands for "neighbor solicitation" per the neighbor discovery protocol |
| ipv6 | nd | other-config-flag | | |
| ipv6 | nd | prefix | | |
| ipv6 | nd | ra | interval | "ra" stands for "router advertisement" per the neighbor discovery protocol |
| ipv6 | nd | ra | lifetime | |
| ipv6 | nd | ra | suppress | |
| ipv6 | nd | reachable-time | | |
| ipv6 | nd | router-preference | | |
| ipv6 | neighbor | | | |
| ipv6 | ospf | area | | |
| ipv6 | ospf | cost | | |
| ipv6 | ospf | dead-interval | | |

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|-----------------------|-------------------|---------------------|--|-----------------------------------------------------------------------------------------------------------------|
| ipv6 | ospf | hello-interval | | |
| ipv6 | ospf | network | | |
| ipv6 | ospf | priority | | |
| ipv6 | ospf | retransmit-interval | | |
| ipv6 | ospf | transmit-delay | | |
| ipv6 | prefix-list | | | |
| ipv6 | route | | | |
| ipv6 | router | ospf | | |
| ipv6 | unicast-routing | | | |
| isis | hello-interval | | | "hello" messages are well known in the networking industry |
| isis | hello-multiplier | | | |
| isis | lsp-interval | | | |
| isis | metric | | | |
| isis | passive | | | |
| isis | passive-interface | | | |
| isis | priority | | | |
| is-type | | | | |
| lACP | port-priority | | | |
| lACP | rate | | | |
| lACP | system-priority | | | |
| link | state | group | | "link state" is a commonly used networking term, typically used in the context of link state routing protocols. |
| link | state | track | | "track" is a commonly used networking term, as discussed in Appendix A. |
| lldp | holdtime | | | |
| lldp | receive | | | |
| lldp | reinit | | | |
| lldp | run | | | |
| lldp | timer | | | |
| lldp | tlv-select | | | |
| lldp | transmit | | | |
| load | interval | | | |
| log-adjacency-changes | | | | |
| log-adjacency-changes | | | | |
| log-adjacency-changes | | | | |
| logging | host | | | |
| mac | access-group | | | |
| mac | access-list | | | |
| mac | address-table | aging-time | | |
| mac | address-table | static | | |
| mac-address | | | | |
| max-connections | | | | |
| maximum-paths | | | | |
| maximum-paths | | | | |
| neighbor | activate | | | |
| neighbor | allowas-in | | | |
| neighbor | default-originate | | | |
| neighbor | description | | | |
| neighbor | ebgp-multihop | | | |
| neighbor | fall-over | bfd | | |
| neighbor | local-as | | | |
| neighbor | next-hop-self | | | |
| neighbor | password | | | |
| neighbor | peer-group | | | |

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| neighbor | peer-group | | |
| neighbor | remote-as | | |
| neighbor | remote-private-as | | |
| neighbor | route-map | | |
| neighbor | route-reflector-client | | |
| neighbor | send-community | | |
| neighbor | shutdown | | |
| neighbor | soft-reconfiguration | | |
| neighbor | timers | | |
| neighbor | transport | connection-mode | |
| neighbor | update-source | | |
| neighbor | weight | | |
| network | area | | |
| no | snmp-server | | |
| ntp | authenticate | | |
| ntp | authentication-key | | |
| ntp | server | | |
| ntp | source | | |
| ntp | trusted-key | | |
| passive-interface | default | | |
| passive-interface | <interface> | | |
| passive-interface | | | |
| policy-map | type | control-plane | |
| policy-map | type | qos | |
| port-channel | load-balance | | |
| port-channel | min-links | | |
| priority-flow-control | mode | | |
| private-vlan | | | |
| private-vlan | mapping | | |
| ptp | domain | | |
| ptp | priority1 | | |
| ptp | priority2 | | |
| ptp | sync | interval | |
| radius-server | deadtime | | |
| radius-server | host | | |
| radius-server | key | | |
| radius-server | retransmit | | |
| radius-server | timeout | | |
| redundancy | force-switchover | | |
| route-map | | | |
| router | bgp | | |
| router | isis | | |
| router | ospf | | |
| router | rip | | |
| router-id | | | |
| router-id | | | |
| routing-context | vrf | | |
| service | sequence-numbers | | |
| set-overload-bit | | | |
| show | aaa | method-lists | |
| show | aaa | sessions | |
| show | arp | | |
| show | bfd | neighbors | |

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|------|--------------|-------------------|--------------|---------|
| show | clock | | | |
| show | dot1q-tunnel | | | |
| show | dot1x | | | |
| show | dot1x | all | summary | |
| show | dot1x | statistics | | |
| show | environment | all | | |
| show | environment | cooling | | |
| show | environment | power | | |
| show | environment | temperature | | |
| show | etherchannel | | | |
| show | flowcontrol | | | |
| show | hostname | | | |
| show | hosts | | | |
| show | interfaces | | | |
| show | interfaces | capabilities | | |
| show | interfaces | description | | |
| show | interfaces | private-vlan | mapping | |
| show | interfaces | status | | |
| show | interfaces | switchport | | |
| show | interfaces | switchport | backup | |
| show | interfaces | transceiver | | |
| show | interfaces | trunk | | |
| show | inventory | | | |
| show | ip | access-lists | | |
| show | ip | arp | | |
| show | ip | bgp | | |
| show | ip | bgp | community | |
| show | ip | bgp | neighbors | |
| show | ip | bgp | paths | |
| show | ip | bgp | peer-group | |
| show | ip | bgp | regex | |
| show | ip | bgp | summary | |
| show | ip | community-list | | |
| show | ip | dhcp | snooping | |
| show | ip | extcommunity-list | | |
| show | ip | helper-address | | |
| show | ip | igmp | groups | |
| show | ip | igmp | interface | |
| show | ip | igmp | snooping | |
| show | ip | igmp | snooping | groups |
| show | ip | igmp | snooping | mrouter |
| show | ip | igmp | snooping | querier |
| show | ip | interface | | |
| show | ip | interface | brief | |
| show | ip | mfib | | |
| show | ip | mrout | | |
| show | ip | mrout | count | |
| show | ip | msdp | mesh-group | |
| show | ip | msdp | peer | |
| show | ip | msdp | rpf-peer | |
| show | ip | msdp | sa-cache | |
| show | ip | msdp | summary | |
| show | ip | nat | translations | |

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|------|------------|---------------|---------------------|------------------|--------------------------------------------|
| show | ip | ospf | | | |
| show | ip | ospf | border-routers | | |
| show | ip | ospf | database | database-summary | |
| show | ip | ospf | interface | | |
| show | ip | ospf | neighbor | | |
| show | ip | ospf | request-list | | |
| show | ip | ospf | retransmission-list | | |
| show | ip | pim | interface | | |
| show | ip | pim | neighbor | | |
| show | ip | pim | rp | | |
| show | ip | pim | rp-hash | | |
| show | ip | prefix-list | | | |
| show | ip | rip | database | | |
| show | ip | rip | neighbors | | |
| show | ip | route | | | |
| show | ip | route | summary | | |
| show | ip | route | tag | | |
| show | ipv6 | access-lists | | | |
| show | ipv6 | bgp | | | |
| show | ipv6 | bgp | community | | |
| show | ipv6 | bgp | neighbors | | |
| show | ipv6 | bgp | summary | | |
| show | ipv6 | interface | | | |
| show | ipv6 | neighbors | | | |
| show | ipv6 | ospf | | | |
| show | ipv6 | ospf | border-routers | | |
| show | ipv6 | ospf | interface | | |
| show | ipv6 | ospf | neighbor | | |
| show | ipv6 | prefix-list | | | |
| show | ipv6 | route | | | |
| show | ipv6 | route | summary | | |
| show | ipv6 | route | tag | | |
| show | isis | database | | | |
| show | isis | interface | | | |
| show | isis | topology | | | |
| show | lacp | counters | | | |
| show | lacp | interface | | | |
| show | lacp | neighbor | | | |
| show | link | state | group | | "link" is a commonly used networking term. |
| show | lldp | | | | |
| show | lldp | neighbors | | | |
| show | lldp | traffic | | | |
| show | mac | access-lists | | | |
| show | mac | address-table | | | |
| show | mac | address-table | aging | time | |
| show | mac | address-table | count | | |
| show | module | | | | |
| show | monitor | session | | | |
| show | ntp | associations | | | |
| show | ntp | status | | | |
| show | policy-map | type | control-plane | | |
| show | policy-map | interface | type | qos | |
| show | policy-map | interface | control-plane | | |

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| show | port-channel | summary | |
| show | port-channel | traffic | |
| show | port-security | | |
| show | port-security | address | |
| show | port-security | interface | |
| show | privilege | | |
| show | ptp | clock | |
| show | ptp | parent | |
| show | ptp | time-property | |
| show | qos | maps | |
| show | radius | | |
| show | redundancy | states | |
| show | reload | | |
| show | role | | |
| show | route-map | | |
| show | snmp | | |
| show | snmp | chassis | |
| show | snmp | community | |
| show | snmp | contact | |
| show | snmp | engineID | |
| show | snmp | group | |
| show | snmp | host | |
| show | snmp | location | |
| show | snmp | mib | |
| show | snmp | source-interface | |
| show | snmp | trap | |
| show | snmp | user | |
| show | snmp | view | |
| show | spanning-tree | | |
| show | spanning-tree | blockedports | |
| show | spanning-tree | bridge | |
| show | spanning-tree | interface | |
| show | spanning-tree | mst | |
| show | spanning-tree | mst | configuration |
| show | spanning-tree | mst | interface |
| show | spanning-tree | root | |
| show | storm-control | | |
| show | tacas | | |
| show | track | | |
| show | user-account | | |
| show | users | | |
| show | version | | |
| show | vlan | | |
| show | vlan | internal | usage |
| show | vlan | private-vlan | |
| show | vlan | summary | |
| show | vrf | | |
| show | vrrp | | |
| snmp | trap | link-status | |
| snmp-server | chassis-id | | |
| snmp-server | community | | |
| snmp-server | contact | | |
| snmp-server | enable | traps | |

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| snmp-server | engineID | local | | |
| snmp-server | engineID | remote | | |
| snmp-server | group | | | |
| snmp-server | host | | | |
| snmp-server | location | | | |
| snmp-server | source-interface | | | |
| snmp-server | user | | | |
| snmp-server | view | | | |
| spanning-tree | bpdufilter | | | As discussed in Appendix B, "bpdu" is an industry defined term related to the spanning-tree protocol. |
| spanning-tree | bpduguard | | | |
| spanning-tree | bridge | assurance | | |
| spanning-tree | cost | | | |
| spanning-tree | guard | | | |
| spanning-tree | link-type | | | |
| spanning-tree | loopguard | default | | |
| spanning-tree | mode | | | |
| spanning-tree | mst | configuration | | |
| spanning-tree | portfast | bpdufilter | default | |
| spanning-tree | portfast | bpduguard | default | |
| spanning-tree | port-priority | | | |
| spanning-tree | transmit | hold-count | | |
| spanning-tree | vlan | | | |
| spf-interval | | | | |
| statistics | per-entry | | | |
| storm-control | | | | |
| switchport | access | vlan | | A switch port is the location on the switch where devices connect to the switch. They are used on switches--not routers. |
| switchport | backup | interface | | |
| switchport | mode | | | |
| switchport | port-security | | | |
| switchport | port-security | maximum | | |
| switchport | private-vlan | mapping | | "private vlan" is a well-known industry term, as described in Appendix B |
| switchport | trunk | allowed | vlan | |
| switchport | trunk | native | vlan | |
| switchport | vlan | mapping | | "mapping" in the vlan context is a well-known industry term |
| tacacs-server | host | | | |
| tacacs-server | key | | | |
| tacacs-server | timeout | | | |
| terminal | length | | | |
| terminal | monitor | | | |
| timers | basic | | | |
| timers | bgp | | | |
| timers | lsa | arrival | | The link-state advertisement (LSA) is a basic communication means of the OSPF routing protocol for the Internet Protocol (IP). |
| timers | throttle | lsa | all | |
| timers | throttle | spf | | |
| username | sshkey | | | |
| vlan | internal | allocation | policy | |
| vrf | definition | | | Virtual routing and forwarding (VRF) is a technology included in IP (Internet Protocol) network routers that allows multiple instances of a routing table to exist in a router and work simultaneously. IETF Internet Draft for RFC 3281 uses term "VRF" in this context. |

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| vrf | forwarding | | Virtual routing and forwarding (VRF) is a technology included in IP (Internet Protocol) network routers that allows multiple instances of a routing table to exist in a router and work simultaneously. IETF Internet Draft for RFC 3281 uses term "VRF" in this context. |
| vrrp | authentication | | |
| vrrp | delay | reload | |
| vrrp | description | | |
| vrrp | ip | | |
| vrrp | ip | secondary | |
| vrrp | preempt | | |
| vrrp | priority | | |
| vrrp | shutdown | | "shutdown" is a widely used command word, as discussed in Appendix A |
| vrrp | timers | advertise | "advertise" is a well-known industry term, and is used in the context of, for example, link state advertisements |
| vrrp | track | | "track" is a widely used command word, as discussed in Appendix A |